



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/622,421 | 07/18/2003 | Paul B. Merkel | 85538PAL | 4963 |

7590

08/05/2005

Paul A. Leipold
Patent Legal Staff
Eastman Kodak Company
343 State Street
Rochester, NY 14650-2201

EXAMINER

SCHWARTZ, PAMELA R

ART UNIT

PAPER NUMBER

1774

DATE MAILED: 08/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,421

Applicant(s)

MERKEL ET AL.

Examiner

Pamela R. Schwartz

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 9, 10 and 16-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11, 12 and 22-34 is/are rejected.
- 7) ☒ Claim(s) 13-15 is/are objected to.
- 8) ☒ Claim(s) 1-34 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: 7/19/03 + 12/21/04

1. Applicant's election with traverse of polyvinyl alcohol binder and fluorosurfactant of claims 13-15 in the reply filed on May 16, 2005 is acknowledged. The traversal is on the ground(s) that the restriction does not materially narrow the search. This is not found persuasive because the election requirement is believed to significantly narrow the search and because the requirement was an election of species, so that upon a finding that the elected species is allowable, the other species will also be examined.

The requirement is still deemed proper and is therefore made FINAL.

2. The references cited on the international search report have all (3) been considered. None of these references are applied in this office action because none of these references appear to disclose anionic colloidal silica. In each case, the silica appears to be modified by a silane coupling agent which would render the silica cationic.

3. It is noted that the examiner is unfamiliar with identification of a counterion for particles of an ink jet recording medium as recited by claim 4. The examiner is unaware of this in the prior art. The examiner has studied applicants' examples that include commercially available colloidal silica without mention of potassium counterions. Nor is there a description in the specification, beyond the scope of the claim 4, of the inclusion of counterions in the material. Therefore, for purposes of this examination, it will be assumed that to the extent counterions are required, they are inherently present in commercially colloidal silica. Applicants are also invited to clarify this issue and to provide evidence from the ink jet art of the inclusion of such counterions.

Art Unit: 1774

4. Claims 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 9, 10, 16-21 remain withdrawn from consideration.

5. Claims 1-8, 11, 12, and 22-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niu et al. (6,689,433). Niu et al. disclose a print media comprising a support having at least one ink receiving layer thereon. The ink receiving layer includes a binder blend and one or more pigments (see the abstract). The reference discusses the importance of drying times at col. 1, lines 20-24 and of gloss at col. 1, line 67 to col. 2, line 8, and specular gloss at col. 29, lines 46-56. Based upon these teachings of the desirability of these properties, it would have been obvious to one of ordinary skill in the art to determine materials and layer thicknesses so that sufficiently short dry times and high gloss are achieved.

The support may be porous or non-porous (see col. 8, line 34-57). An absorbing layer may be present between the support and the ink receiving layer (see col. 9, lines 4-28). An ink receiving layer 30 is applied to the support (see col. 10, line 63 to col. 11, line 2). The layer includes multiple binders including latex binders and polyvinyl alcohol (see col. 15, line 49-col. 16, line 38, col. 17, lines 40-58). Polyvinyl alcohol may be present and have a degree of hydrolysis within the range instantly claimed (see col. 18, line 18 to col. 19, line 34). While the glass transition temperature of the latex is not disclosed and the viscosity of the polyvinyl alcohol is not disclosed, it would have been obvious to one of ordinary skill in the art to select binders and proportions of binders to

Art Unit: 1774

take into account coating characteristics such binders would produce in the coating composition so the composition is successfully coated onto the support. Colloidal silica may be included. It does not have to be treated and since silica is inherently anionic, the silica will be anionic. While no limiting size range is set forth, a size range of 300 to 400 nm is disclosed (see col. 21, lines 36-65). It would have been obvious to one of ordinary skill in the art to use smaller and relatively uniformly sized particles in order to form a glossy surface.

Fluorosurfactants such as Lodyne ® are included as well in amounts of .02 to 2% by weight (see col. 22, line 45 to col. 23, line 14). pH modifier may be present to control pH within desired values (see col. 23, line 55 to col. 24, line 5). Hardeners, including vinyl sulfones may be present (see col. 24, line 6-21). Coating weights recited by the reference are non-limiting and are within the range of 5-13 g/m² (col. 26, line 28-34). This is likely the range for a porous base or base layer. It would have been obvious to one of ordinary skill in the art to include a thicker coating when the base layer is non-porous so that the medium has sufficient ink absorption. Finally, it would have been obvious for one of ordinary skill in the art to determine the pH of the recording layer when moistened based upon the intended ink jet recording ink to be used with the medium. It is well known that desired print results are achieved when the medium and the ink have complimentary pH values.

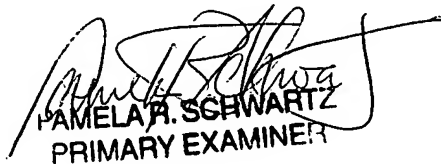
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela Schwartz whose telephone number is (571) 272-1528.

Art Unit: 1774

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PRSchwartz
July 24, 2005



PAMELA R. SCHWARTZ
PRIMARY EXAMINER